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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of
Redevelopment of Spectrum to
Encourage Innovation in the
Use of New Telecommunications
Technologies

ET Docket No. 92-9

To: The Commission

COMMENTS OF THE MONTANA POWER COMPANY

The Montana Power Company (MPC or Company) has a significant interest in the Notice of Proposed Rule Making (NPRM) released February 7, 1992, in the above-captioned proceeding. In its NPRM, the FCC proposes to reallocate 220 MHz of spectrum in the 1850-2200 MHz band as a "spectrum reserve" for emerging technologies.

The Company has previously expressed its opinions on this subject in the PCS inquiry - General Docket 90-314. (A copy of our comments is attached and incorporated herein by reference.) In addition, MPC supports the comments made in this docket by the Utilities Telecommunications Council (UTC). Therefore, in these comments, MPC will limit its discussion to the points it considers crucial.

MPC is an investor-owned utility providing electrical and gas service to over 360,000 customers in Montana. The Company's operating territory is in excess of 110,000 square miles and extends from the plains of eastern Montana to the

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rugged mountainous terrain of western Montana. MPC operates a large microwave system encompassing facilities from Kalispell to Butte to Colstrip, Montana, a distance of 600 miles, and from Butte to Great Falls, Montana to Canada, a distance of 300 miles. Over 90% of the system uses a 1.8 to 2.3 GHz band. The path lengths on the MPC system were selected to take advantage of terrain considerations and are therefore quite long. Any new allocation to higher frequencies would require substantial changes and additions, including several new transmitter sites and a change out of all existing equipment. The development of a large number of new sites to accommodate shorter path lengths and change out of equipment would result in substantial costs approaching approximately \$30 million.¹

MPC believes that in analyzing this issue, the NPRM has neglected to address certain crucial threshold issues. MPC submits that these issues, as discussed below, must be factored into the FCC's analysis before a final decision is made. From MPC's perspective, it's not good policy to reallocate the spectrum and later evaluate the precise impact of implementing the new services.

Perhaps, the most fundamental question that must be addressed is "what is the need"? Given the serious implications of this docket, the NPRM provides an unusually short explanation of need, but instead generally declares that the emerging technologies bands would be productive and advantageous for

¹ This number is a refinement of the \$50 million mentioned in MPC's December 18, 1991 letter in response to Gen. Docket 90-314.

development of new communications technologies. The FCC must go beyond these cursory reasons and thoroughly explain the pressing needs that are driving this docket. Certainly, as a part of its analysis, the FCC must consider whether any of the new services suggested for the emerging technologies band would provide any benefits that outweigh the significant burdens that would be imposed on existing users of the band.

Furthermore, the NPRM must critically evaluate the availability of alternative bands; currently, the rule making ignores such an evaluation. Like the UTC, MPC believes that a thorough analysis must determine the availability of the federal spectrum for emerging technologies as well as the availability of other alternative bands.

MPC's and its customers' major concerns are reliability, costs and effects on the environment. MPC operates over 100 transmitters in the 2 GHz band. The communications made possible by these transmitters are essential for the reliable and safe operation of the Company's electric and gas systems. This communication grid controls the flow of electrical power to match at all times our power generation to our customers' needs as well as to major Northwest United States regional resources. The instantaneous monitoring of the gas system is critical for meeting customer needs. Absent truly instantaneous communications, relatively minor disruptions could cause major blackouts or significant losses of natural gas supplies to large areas. The significant point is that there is no technology that can perform these essential communication functions for electric

and gas utilities as rapidly, reliably and economically as microwave.

The FCC has also mentioned the alternative of fiber optic technology. The UTC's comments discuss this issue, and MPC supports the UTC's arguments. Simply, for MPC and other utilities, fiber is a supplement to its needs and cannot substitute for microwave data and communication media.

The NPRM must also consider the effects on the environment. Many of the path lengths in Montana take advantage of the terrain so that long path lengths associated with the 2 GHz spectrum are utilized. If a move to 6 GHz is mandated, a substantial number of new sites will be required. The addition of new taller towers, antennas and accessory buildings will be an inevitable and significant environmental and economic burden that MPC, its ratepayers, and third parties must confront on a daily basis.

In Montana, weather-related effects must also be factored into any consideration of moving from 2 GHz to higher frequencies. If a move to a higher frequency is required, reliability of MPC's communication system will be degraded and compromised because the change will require an increase in the number of hops, thus introducing an entirely new link in the communications chain and increasing the likelihood of malfunction. The NPRM currently does not discuss this consequence, but it must for this is a real, not imagined, consequence if MPC is required to move to another spectrum. We

emphasize that the NPRM must consider this inevitable degradation result.

MPC believes that if all the crucial issues are reviewed in this docket, the FCC will find a band other than the 2 GHz band for the emerging technologies. However, if the FCC insists on the move, then it must consider other significant points.

First, "co-primary" is an essential term that the NPRM does not define. MPC, like the UTC, strongly believes that the Commission must define this term as a first in time, first in right status to insure that the operations of the first licensee on a given frequency in a geographic area are protected from interference. It is also important to establish interference criteria to protect co-primary users.

Second, co-primary status must be on an indefinite basis for all 2 GHz microwave users. While MPC does not doubt the unique economic and operational considerations involved in relocating state and local government agencies, these considerations are certainly no less for a utility like MPC. No logical basis exists for the distinction between governments and other entities that provide essential services. MPC believes this equal treatment is crucial. Moreover, the concerns that a utility would hold the spectrum hostage to seek windfall profits are unwarranted.

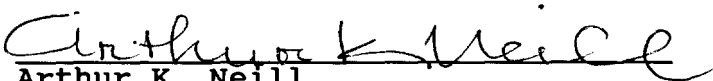
Finally, the NPRM must define more precisely the "buy-out" of spectrum by emerging technologies. Clearly, all relocation costs for existing users of the 2 GHz band must be

paid by the new technology licensees. Utility ratepayers and stockholders must not suffer any consequences from the relocation. It remains, however, that "buy-out" is a poor substitute for the status quo.

In summary, and so that no ambiguity exists, MPC believes that the emerging technologies should be relocated to a spectrum other than a 2 GHz band. At this time, the uses in the band are simply too crucial to allow displacement. MPC believes that if the FCC comprehensively weighs the costs and benefits of its action, it will reach the same conclusion. If, however, the FCC proceeds with its action, then co-primary status on an indefinite basis must be uniformly applied, and displaced entities like MPC must be given every consideration and every benefit of the doubt.

Thank you for this opportunity to comment.

THE MONTANA POWER COMPANY

By: 
Arthur K. Neill
Executive Vice President
Utility Services
40 East Broadway
Butte, MT 59701

DATED: June 4, 1992

MPM028



GENERAL OFFICES: 40 EAST BROADWAY, BUTTE, MONTANA 59701

MONTANA POWER COMPANY

ARTHUR K. NEILL
EXECUTIVE VICE PRESIDENT

December 18, 1991

Ms Donna R Searcy
Secretary
Federal Communications Commission
1919 M Street, NW Room 222
Washington, DC 20554

RE : PCS Inquiry -- Gen Docket 90-314

Dear Ms Searcy:

The Montana Power Company hereby submits its comments regarding the Federal Communications Commission's PCS Inquiry and recent En Banc hearing regarding PCS.

The Montana Power Company is an investor-owned utility providing electrical and gas service to over 360,000 customers in Montana. Our operating territory is in excess of 110,000 square miles and extends from the plains of eastern Montana to the rugged mountainous terrain of western Montana. The Montana Power Company operates a large microwave system encompassing facilities from Kalispell to Butte to Colstrip, a distance of 600 miles and from Butte to Great Falls to Canada, a distance of 300 miles. Over 90% of the system uses a 1.8 to 2.3 Ghz band. The path lengths on The Montana Power Company system were selected to take advantage of terrain considerations and are, therefore, quite long. Any new allocation to higher frequencies would require substantial changes and additions including several new transmitter sites and a changeout of all existing equipment. The development of a large number of new sites to accommodate shorter path lengths and changeout of equipment would result in substantial costs approaching \$50 million.

The Montana Power Company's major concerns are reliability, cost and impacts on the environment. The Montana Power Company operates over 100 transmitters in the 2 GHz band. The communications made possible by these transmitters is essential to the reliable and safe operation of our electric and gas systems. We control the flow of electrical power to match at all times our power generation to customers' needs. The instantaneous monitoring of the gas system is critical for meeting customer needs. Absent truly instantaneous communications, relatively minor disruptions could become major blackouts or loss of natural gas supplies to large areas.

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The most important point to be made is that there is no technology that can perform these essential communication functions for electric and gas utilities as rapidly, reliably and economically as microwave.

The only alternative to microwave in the 2 GHz band is microwave in other bands. During emergencies it is critical that utilities, such as The Montana Power Company, have priority land mobile and microwave systems free from traffic saturation typically experienced on public communication networks during emergencies.

In the event of natural disasters such as earthquakes and storms, utility crews work continuously around the clock to restore vital public services and it is not in the public's best interest for utilities to compete with non-utility traffic on public communication networks. It is abundantly clear that any restriction on a utility's ability to obtain and operate private communication facilities threatens the reliability and the safe operation of the underlying utility system.

Even if all of The Montana Power Company's transmitters could be relocated to higher frequency bands, there would still be a requirement in many cases to substantially increase the height of existing towers, as well as increase the number of stations with all the environmental disputes and impacts attendant to such construction. As stated earlier, these costs are estimated to be \$50 million.

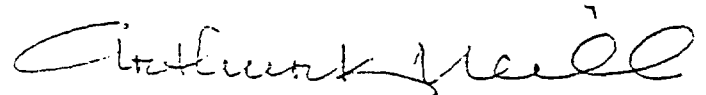
The Montana Power Company understands that certain proponents of PCN are claiming that PCN can share the fixed microwave bands through the use of spread spectrum or other techniques. The Montana Power Company is skeptical of these claims and urges the FCC to review these claims carefully before authorizing PCN on a band-sharing basis. The Montana Power Company depends heavily on its microwave communications and any disruption or interference could not be tolerated.

In no event, should a fixed microwave user be forced to relocate from the 1850-2200 MHz band until: (1) there is adequate replacement spectrum made available in close proximity to the 1850-2200 MHz band; (2) adequate time is allowed to construct replacement facilities; and (3) the cost for any relocation is paid for by the PCN licensee. Any compensation for the relocation of existing users should be arrived at through negotiations between the existing user and the PCN licensee. Beyond these costs and technical consideration, it is almost incomprehensible that such a major disruption to established communication networks is even being considered by the Commission.

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At a time when American business is called upon to provide meaningful examples to the world around us, such extravagances offer poor examples of how to be competitive.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Clinton Anderson".

EAB367/gah